Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Missile Defense Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

0400: Research, Development, Test & Evaluation, Defense-Wide

PE 0603908C: BMD EUROPEAN INTERCEPTOR SITE

BA 4: Advanced Component Development & Prototypes (ACD&P)

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
DX48: European Capability Block 4	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722

Note

Funding for European Interceptor Site construction in FY 2008 and FY 2009 previously captured in the Midcourse PE RDT&E budget exhibits is now explained in MDA Military Construction (MILCON) DD Forms 1390/1391.

A. Mission Description and Budget Item Justification

The European Capability Block 4 RDT&E program (Project DX48) expands the Ballistic Missile Defense System (BMDS) capability to defend allies and deployed forces in Europe from limited Iranian long-range threats by establishing both an Interceptor Site and a Midcourse Radar site in Europe. The European Interceptor Site (EIS) is planned as a United States (U.S.) facility on foreign soil, supported by a European Midcourse Radar (EMR), also planned as a United States (US) facility in Europe. Both the EIS and EMR will interface with US command and control nodes in Europe through upgrades to US communications at Ramstein Air Force Base (Germany). The Command & Control communications interface upgrade in Europe is known as the European Communications System (ECS).

The European Interceptor Site (EIS) will establish, operate, and maintain the following major components:

Ten (10) Ground Based Interceptors (Two-Stage).

Ten (10) Interceptor silos and ten (10) Silo Interface Vaults capable of supporting Interceptors and Launch Support Equipment (LSE) that interfaces with on-site Command Launch Equipment (CLE).

A Re-locatable In Flight Interceptor Communications System (IFICS) Data Terminal (RIDT) capable of sending in-flight target updates to and receiving in-flight status reports from Interceptors launched from the EIS.

The Ballistic Missile Defense System (BMDS) Communications System Complex (BCSC) in support of the European Interceptor Site (EIS) consolidates all of the communications systems in one facility: Satellite Communication (SATCOM), Defense Information Systems Network (DISN) core, campus communications (includes

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the Defense Systems Network (DSN), Secret Internet Protocol Router Network (SIPRNET), Non-Secure Internet Protocol Router Network (NIPRNET) to include Video Teleconferencing Internet Protocol (VTCoIP) capability, and unclassified telephone service), Gateway, communications management, and wide area networks. This capability will provide the communications connectivity from the interceptor site to the BMDS Network.

Military Construction Funds (MILCON) are appropriated for site preparation and construction of all EIS facilities The European Midcourse Radar (EMR) Site will operate and maintain the following major components:

The European Midcourse Radar is a steerable, X-band phased array radar currently located at Kwajalein Missile Range (KMR). The high-resolution X-band sensor will provide search, track, and discrimination of Intercontinental Ballistic Missiles (ICBMs) in the midcourse phase of flight. This data will be forwarded via communications links to the BMDS. Starting in FY08, the EMR back-end hardware (signal and data processing equipment, etc.) will be upgraded and then, deployed to the European location. Hardware (HW) upgrade design, Common Software (SW) development, Acquisition of long lead and develop and implement detailed obsolescence risk reduction plans. Design and begin manufacture of new EMR Radome. Disassemble and transport GBR-P antennae and mount from Kwajalein to the European Theater Military Construction Funds (MILCON) are appropriated for site preparation and construction of all EMR facilities

The European Communications System (ECS) located in Ramstein AFB, Germany will provide an integrated layered defense by networking and unifying (common purpose) individual element components (sensors, weapon systems, fire control) with all military echelons across the globe. This will allow the National Command Authority (NCA) and commanders at strategic and tactical levels to systematically plan the fight (BMD Planner), commonly see it unfold (situational awareness), and dynamically direct/adjust (Global Engagement Manager (GEM)/Battle Management) networked sensors and weapons systems (BMD Network) to optimally engage (one shot - one kill) ballistic missile threats at any range, in any phase of flight, at any time. The C2BMC system provides the means to move information and data from theater and regional to a global missile defense. This communications network, part of the larger U.S. command and control system, transmits and receives data on threat missile launches, missile flight profiles, and projected target locations, enabling political and military leaders to determine when and where to launch weapons to intercept them. The system is designed to rapidly provide a wide range of information to decision-makers because of the short distances in Europe and the great speed of ballistic missiles that require threat assessment and interceptor launch decisions in just minutes.

At its completion, the EIS will provide the capability to support and launch ten (10) interceptors to protect the United States and its allies. The EIS MILCON project includes the following activities: Site preparation and the construction of EIS facilities including: SIVs/Silos, an Interceptor Monitoring Facility, EKV fuel storage and

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Missile Defense Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

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oxidizer storage facilities, Interceptor Tank/De-tank Facility, Mechanical-Electrical building, Primary & Backup Power Plant, RIDT complex, BMD Communications Support Complex (BCSC) as well as a host of support and security related facilities to ensure the effective operation, maintenance and security of the site.

The Block 4.0 Capability Goals are consistent with the MDA MFP, which ensures the orderly and effective integration, testing, fielding and supportability of BMDS Elements and components for the Warfighter. Performance goals are specified via:

Defended area

Launch area denied

Probability of engagement success

Threat/Countermeasures

Environmental resistance for both Long Range Ballistic Missiles (LRBM) and Intermediate Range Ballistic Missiles (IRBM).

Classified metrics for these goals are contained in the Ballistic Missile Defense System Specification (BMD SS) document.

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	362.007	0.000	0.000	0.000	0.000
Current President's Budget	348.722	0.000	0.000	0.000	0.000
Total Adjustments	-13.285	0.000	0.000	0.000	0.000
Congressional General Reductions		0.000			
 Congressional Directed Reductions 		0.000			
Congressional Rescissions	0.000	0.000			
Congressional Adds		0.000			
 Congressional Directed Transfers 		0.000			
Reprogrammings	-7.707	0.000			
SBIR/STTR Transfer	-5.578	0.000			
Other Adjustment Detail	0.000	0.000	0.000	0.000	0.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Missile Def	fense Agency	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603908C: BMD EUROPEAN INTERCEPTOR SITE	
<u>Change Summary Explanation</u> FY 2009 decrease includes SBIR/STTR and MDA adjustments	i.	

DATE: February 2010

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APPROPRIATION/BUDGET ACTIV 0400: Research, Development, Test BA 4: Advanced Component Develo	t & Evaluatio				IOMENCLA 8C: <i>BMD EU</i> TOR SITE			PROJECT DX48: Euro			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
DX48: European Capability Block 4	348.722	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	348.722
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

NA

A. Mission Description and Budget Item Justification

Block 4.0 provides the funding for the expansion of the BMDS capability at a third missile site; execution of the flight and ground testing program to include the demonstration of additional Engagement Sequence Groups (ESGs); fielding of additional interceptors; and the sustainment and support for the fielded capability.

Block 4.0 incorporates the next increment of fielded capability with up to ten (10) additional interceptors for either a European Site or expanded inventory at Fort Greely, AK.

Block 4.0 planned additional enhancements for European Capability includes:

Exhibit R-2A. RDT&E Project Justification: PB 2011 Missile Defense Agency

European Interceptor Site (EIS) with ten (10) additional silos and ten (10) Silo Interface Vaults (SIVs) capable of supporting interceptors and Launch Support Equipment (including CLE) to support interceptors and provide capabilities comparable to other operational sites.

Design and development of GFC improvements to include multi-AOR.

A Relocatable IFICS Data Terminal (RIDT) capable of sending in-flight target updates to and receiving in-flight status reports from interceptors launched from European Capability.

GMD Communication Network (GCN) infrastructure connecting European Capability components to GMD Fire Control (GFC) Nodes located at the Missile Defense Integration and Operations Center (MDIOC) and Fort Greely, AK.

European Capability facilities including: Interceptor Monitoring Facility, Mechanical Electrical Building (MEB), Interceptor Storage Facility, RIDT Building, Military Satellite Communications (MILSATCOM) facility and other facilities at the European Interceptor Site (EIS) capable of providing appropriate protection of equipment. Fielding of ten (10) 2-Stage configuration GBIs.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

0400: Research, Development, Test & Evaluation, Defense-Wide BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603908C: BMD EUROPEAN

DX48: European Capability Block 4

INTERCEPTOR SITE

ESGs are demonstrated in the GMD Integrated Test Program. Capabilities of the BMDS will be enhanced as the number of operationally available ESGs increases. During Block 4.0, GMD will demonstrate capability in two additional BMDS ESGs:

Engage on FBX-T (Hercules Algorithm) Launch on FBX-T (Hercules Algorithm)

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Planning/Design/Site Activation	94.241	0.000	0.000	0.000	0.000
See Description Below					
FY 2009 Accomplishments: The GMD Ground Systems (GS) enable fire control and operation of the GMD Element as part of the BMDS. The European Site Ground System project includes ten (10) missile silos and Silo Interface Vault (SIVs), (2) IFICS Data Terminal, connectivity to the GMD Communication Network (GCN), Command Launch Equipment, and upgraded Ground Systems hardware.					
Continued planning and design for a European Interceptor Site (EIS) missile defense complex. Continued acquisition of Long Lead silos and SIVs for the European Interceptor Site. Initiated European Interceptor Site upon ratification of Host Nation Agreement.					
FY 2010 Plans: NA					
FY 2011 Base Plans: NA					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010 **PROJECT** APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE** DX48: European Capability Block 4

0400: Research, Development, Test & Evaluation, Defense-Wide PE 0603908C: BMD EUROPEAN

BA 4: Advanced Component Development & Prototypes (ACD&P) INTERCEPTOR SITE

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans:					
NA					
Ground Based Interceptor (Long Lead)	1.844	0.000	0.000	0.000	0.000
See Description Below					
FY 2009 Accomplishments: During Block 4.0 ten (10) 2-stage configuration Ground Based Interceptors (GBIs) will be developed and fielded within EUCOM to defend U.S. allies and deployed forces in Europe from limited Iranian long-range threats.					
Prepared to initiate acquisition of long lead for development of ten (10) two-stage GBIs (European Capability Fielding), pending successfully meeting the criteria described in Section 226 of the FY08 National Defense Authorization Act.					
FY 2010 Plans: NA					
FY 2011 Base Plans: NA					
FY 2011 OCO Plans: NA					
wo-Stage Interceptor Development	238.361	0.000	0.000	0.000	0.000
See Description Below					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

PROJECT APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE** 0400: Research, Development, Test & Evaluation, Defense-Wide PE 0603908C: BMD EUROPEAN

DX48: European Capability Block 4 BA 4: Advanced Component Development & Prototypes (ACD&P)

INTERCEPTOR SITE

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: The two stage interceptor development consists of the integration of a two-stage booster which is based on and leverages the existing three-stage design.					
Completed acquisition of one (1) 2-Stage GBI for the Booster Verification Test (BVT) (Flight Test). Initiated the acquisition of one (1) 2-Stage GBI (Flight Test) for the FY10 2-Stage Interceptor Flight Test. Continued Development of 2-Stage Booster Completed acquisition of one (1) GBIs for Ground Test, originally initiated as 3 stage GBIs in Block 1, now part of the acceleration of the 2-Stage development program. Continued planned acquisition of one (1) GBI for Ground Test, originally initiated as 3-stage GBI in Block 1, now part of the acceleration of the 2-Stage development program.					
FY 2010 Plans: NA					
FY 2011 Base Plans: NA					
FY 2011 OCO Plans: NA					
European Interceptor Site (EIS) Communications	14.276	0.000	0.000	0.000	0.000
See Description Below					
FY 2009 Accomplishments: The Ballistic Missile Defense System (BMDS) Communications System Complex (BCSC) in support of the European Interceptor Site (EIS) consolidates all of the communications systems in one					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010 **R-1 ITEM NOMENCLATURE PROJECT** APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide PE 0603908C: BMD EUROPEAN DX48: European Capability Block 4 BA 4: Advanced Component Development & Prototypes (ACD&P) INTERCEPTOR SITE B. Accomplishments/Planned Program (\$ in Millions) FY 2011 FY 2011 FY 2011 **FY 2009 FY 2010** Base OCO Total

facility: Satellite Communication (SATCOM), Defense Information Systems Network (DISN) core, campus communications (includes the Defense Systems Network (DSN), Secret Internet Protocol Router Network (SIPRNET), Non-Secure Internet Protocol Router Network (NIPRNET) to include Video Teleconferencing Internet Protocol (VTCoIP) capability, and unclassified telephone service), Gateway, communications management, and wide area networks. This capability will provide the communications connectivity from the interceptor site to the BMDS Network.

Provided engineering support to ensure the EIS BCSC integration into the overall BMDS Initiated development and procurement of communication support for MDA operations in Poland Continued BCSC acquisition

Continued acquisition of Modernization Enterprise Terminal (MET) SATCOM X/Ka-Band capability Continued acquisition of Communications Power System

Continued acquisition of Defense Red Switch Network (DRSN) equipment Initiated acquisition and lease of terrestrial communications capability (fiber optic cable, microwave,

etc.) to support circuit requirements of the EIS

FY 2010 Plans:

NA

FY 2011 Base Plans:

NA

FY 2011 OCO Plans:

NA

Accomplishments/Planned Programs Subtotals 348.722 0.000 0.000 0.000 0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

PROJECT APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE**

0400: Research, Development, Test & Evaluation, Defense-Wide PE 0603908C: BMD EUROPEAN DX48: European Capability Block 4 BA 4: Advanced Component Development & Prototypes (ACD&P)

INTERCEPTOR SITE

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	<u>Base</u>	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cos
• 0603175C: Ballistic Missile	117.602	189.229	132.220	0.000	132.220	236.875	239.873	197.118	197.852	0	1,310.769
Defense Technology											
0603881C: Ballistic Missile	951.414	715.732	436.482	0.000	436.482	250.275	336.711	500.983	521.717	0	3,713.314
Defense Terminal Defense											
Segment											
0603882C: Ballistic Missile	1,472.683	1,027.371	1,346.181	0.000	1,346.181	1,112.655	1,291.790	1,099.029	1,033.213	0	8,382.92
Defense Mid-Course Segment											
0603883C: Ballistic Missile	384.365	182.317	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	566.68
Defense Boost Defense Segment											
0603884C: Ballistic Missile	682.754	621.017	454.859	0.000	454.859	469.589	681.397	650.525	616.342	0	4,176.48
Defense Sensors											
0603886C: Ballistic Missile	308.869	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	308.86
Defense System Interceptor											
0603888C: Ballistic Missile	906.952	823.333	1,113.425	0.000	1,113.425	1,105.959	951.371	871.929	829.608	0	6,602.57
Defense Test and Targets											
0603890C: Ballistic Missile	402.776	358.751	402.769	0.000	402.769	468.673	457.745	473.871	488.799	0	3,053.38
Defense Enabling Programs											
• 0603891C: <i>SPECIAL</i>	182.998	250.185	270.189	0.000	270.189	269.040	450.645	517.486	601.315	0	2,541.85
PROGRAMS - MDA											
• 0603892C: <i>BMD AEGIS</i>	1,054.323	1,435.717	1,467.278	0.000	1,467.278	1,021.878	1,112.668	1,076.739	923.316	0	8,091.91
• 0603893C: <i>SPACE TRACKING</i> &	209.831	161.609	112.678	0.000	112.678	98.500	56.424	52.928	34.661	0	726.63
SURVEILLANCE SYSTEM											
• 0603894C: <i>MULTIPLE KILL</i>	226.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	226.02
VEHICLE											
• 0603895C: <i>BMD SYSTEM</i>	23.250	12.492	10.942	0.000	10.942	11.182	11.347	11.749	12.155	0	93.11
SPACE PROGRAM											
0603896C: <i>BMD C2BMC</i>	275.174	334.734	342.625	0.000	342.625	364.085	289.778	323.922	298.936	0	2,229.25
• 0603897C: <i>BMD HERCULES</i>	51.629	47.932	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	99.56

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency **DATE:** February 2010

PROJECT APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE** PE 0603908C: BMD EUROPEAN

0400: Research, Development, Test & Evaluation, Defense-Wide BA 4: Advanced Component Development & Prototypes (ACD&P)

INTERCEPTOR SITE

DX48: European Capability Block 4

C. Other Program Funding Su	<u>ımmary (\$ in Millions)</u>
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WARFIGHTER SUPPORT • 0603901C: DIRECTED ENERGY 0.000 0.000 98.688 0.000 98.688 101.371 103.449 104.572 104.141 0 512.221 RESEARCH • 0603904C: MISSILE DEFENSE 102.823 86.483 86.198 0.000 86.198 88.181 78.517 80.410 83.087 0 605.699 INTEGRATION & OPERATIONS	C. Other Program Funding Summa	ry (\$ in iviiii	<u>ions)</u>									
- 06038980: BMD JOINT				FY 2011	FY 2011	FY 2011					Cost To	
WARFIGHTER SUPPORT - 0603901C: DIRECTED ENERGY			FY 2010					FY 2013			<u>Complete</u>	Total Cost
- 0603901C: DIRECTED ENERGY	• 0603898C: <i>BMD JOINT</i>	66.283	61.098	68.726	0.000	68.726	62.239	63.451	65.158	67.231	0	454.186
RESEARCH	WARFIGHTER SUPPORT											
- 0603904C: MISSILE DEFENSE 102.823 86.483 86.198 0.000 86.198 88.181 78.517 80.410 83.087 0 605.699 INTEGRATION & OPERATIONS CENTER (MDIOC) - 0603906C: REGARDING 3.159 6.130 7.529 0.000 7.529 8.295 8.286 8.479 8.675 0 50.553 TRENCH - 0603907C: SEA BASED X-BAND 143.878 167.153 153.056 0.000 153.056 150.104 159.832 160.163 197.099 0 1.131.285 RADAR (SBX) - 06039907C: BMD EUROPEAN 73.728 0.000 0	0603901C: DIRECTED ENERGY	0.000	0.000	98.688	0.000	98.688	101.371	103.449	104.572	104.141	0	512.221
INTEGRATION & OPERATIONS CENTER (MDIOC) • 0603906C: REGARDING 3.159 6.130 7.529 0.000 7.529 8.295 8.286 8.479 8.675 0 50.553 TRENCH • 0603907C: SEA BASED X-BAND 143.878 167.153 153.056 0.000 153.056 150.104 159.832 160.163 197.099 0 1,131.285 RADAR (SBX) • 0603909C: BMD EUROPEAN 73.728 0.000	RESEARCH											
CENTER (MDIOC)		102.823	86.483	86.198	0.000	86.198	88.181	78.517	80.410	83.087	0	605.699
- 060390fC: REGARDING 3.159 6.130 7.529 0.000 7.529 8.295 8.286 8.479 8.675 0 50.553 TRENCH - 060390fC: SEA BASED X-BAND 143.878 167.153 153.056 0.000 153.056 150.104 159.832 160.163 197.099 0 1,131.285 RADAR (SBX) - 060390fC: SEA BASED X-BAND 143.878 0.000	INTEGRATION & OPERATIONS											
TRENCH	CENTER (MDIOC)											
O603907C: SEA BASED X-BAND 143.878		3.159	6.130	7.529	0.000	7.529	8.295	8.286	8.479	8.675	0	50.553
RADAR (SBX)												
**O603909C: BMD EUROPEAN 73.728 0.000 0.00		143.878	167.153	153.056	0.000	153.056	150.104	159.832	160.163	197.099	0	1,131.285
MIDCOURSE RADAR • 0603911C: BMD EUROPEAN												
• 0603911C: BMD EUROPEAN		73.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	73.728
CAPABILITY • 0603912C: BMD European												
• 0603912C: BMD European 26.016 0.000 0.00		0.000	50.226	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	50.226
Comm Support • 0603913C: ISRAELI											_	
• 0603913C: ISRAELI		26.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	26.016
COOPERATIVE • 0604880C: LAND-BASED SM-3											_	
• 0604880C: LAND-BASED SM-3		0.000	201.323	121.735	0.000	121.735	111.100	113.101	116.114	119.172	0	782.545
• 0604881C: Aegis SM-3 BLOCK 0.000 255.987 318.800 0.000 318.800 405.500 416.300 337.300 227.500 0 1,961.387 IIA CO-DEVELOPMENT • 0604883C: PRECISION 0.000 0.000 66.969 0.000 66.969 123.851 184.800 348.360 482.952 0 1,206.932 TRACKING SPACE SYSTEM • 0604884C: AIRBORNE 0.000 0.000 111.671 0.000 111.671 103.636 123.591 103.668 58.773 0 501.339 INFRARED (ABIR) • 0605502C: Small Business 124.788 0.000 0.0				004.070		004.070	0.45.005	407.000	00.450		•	
IIA CO-DEVELOPMENT • 0604883C: PRECISION												,
• 0604883C: PRECISION	_	0.000	255.987	318.800	0.000	318.800	405.500	416.300	337.300	227.500	0	1,961.387
TRACKING SPACE SYSTEM • 0604884C: AIRBORNE 0.000 0.000 111.671 0.000 111.671 103.636 123.591 103.668 58.773 0 501.339 INFRARED (ABIR) • 0605502C: Small Business 124.788 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.124.788 Innovative Research BMDO		0.000	0.000	00.000	0.000	00.000	100.051	404.000	0.40.000	100.050	•	4 000 000
• 0604884C: AIRBORNE 0.000 0.000 111.671 0.000 111.671 103.636 123.591 103.668 58.773 0 501.339 INFRARED (ABIR) • 0605502C: Small Business 124.788 0.000 0.		0.000	0.000	66.969	0.000	66.969	123.851	184.800	348.360	482.952	0	1,206.932
INFRARED (ABIR) • 0605502C: Small Business 124.788 0.000 0.0		0.000	0.000	444.074	0.000	444.074	100.000	400 504	400.000	50.770	0	504.000
• 0605502C: Small Business 124.788 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000		0.000	0.000	111.671	0.000	111.671	103.636	123.591	103.668	58.773	0	501.339
Innovative Research BMDO	, ,	404 700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	404 700
		124.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Ü	124.788
• 0901363C. Ferilagori Reservation 20.146 19.709 20.462 0.000 20.482 0.000 0.000 0.000 0.000 0.000 0 60.337		20.446	10 700	20.492	0.000	20.492	0.000	0.000	0.000	0.000	0	60 227
	• USU 1585C: Pentagon Reservation	20.146	19.709	20.482	0.000	20.482	0.000	0.000	0.000	0.000	Ü	60.337

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Missile Defense Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

0400: Research, Development, Test & Evaluation, Defense-Wide

PE 0603908C: BMD EUROPEAN

R-1 ITEM NOMENCLATURE

DX48: European Capability Block 4

PROJECT

BA 4: Advanced Component Development & Prototypes (ACD&P)

INTERCEPTOR SITE

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	<u>Base</u>	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
0901598C: Management	87.151	52.403	29.754	0.000	29.754	29.421	29.974	30.567	31.171	0	290.441
Headquarters-MDA											

D. Acquisition Strategy

EIS will continue to follow the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, development, and evolutionary acquisition through the use of MDA's new block structure and spiral development. The Department has structured the missile defense acquisition strategy to continually provide needed upgrades to the EIS system components within the new block structure. This process allows early implementation of new technologies and enhanced capabilities able to defend against the evolving threats of today and the future. This process also minimizes the risk of obsolescence, provides opportunities for standards updates, and allows decision makers to make informed trades between cost, schedule, and performance while exploring operational and technological possibilities. This developmental approach has been enhanced within the EIS program to include additional test infrastructure, improved test management, and improved models and simulations that have enhanced EIS's ability to test in more complex and operationally realistic test environments earlier than the standard acquisition process.

E. Performance Metrics

NA

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency

APPROPRIATION/BUDGET ACTIVITY

0400: Research, Development, Test & Evaluation, Defense-Wide

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DX48: European Capability Block 4

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Product Development (\$ in Millions)

				FY 2	010	FY 201 Base		FY 2 OC		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Ground Systems Planning/Design/Site Activation DX48	C/CPAF	Boeing AL/AK/AZ/CA/ CO/MA/VA/ Europe Site	65.140	0.000		0.000		0.000		0.000	0	65.140	65.140
Ground Systems Missile Field Equipment DX48	C/CPAF	Boeing AL/AK/AZ/CA/ CO/VA/Europe Site	82.191	0.000		0.000		0.000		0.000	0	82.191	82.191
Ground Based Interceptor Ground Based Interceptor (Long Lead) DX48	SS/CPAF	Boeing AL/AK/AZ/CA/ CO/UT/VA	19.200	0.000		0.000		0.000		0.000	0	19.200	19.200
Two-Stage Interceptor Development 2- Stage Integration and Development DX48	C/CPAF	Boeing AL/AK/AZ/CA/ CO/UT/VA	122.700	0.000		0.000		0.000		0.000	0	122.700	122.700
European Interceptor Site (EIS) Communications EIS - Comms Engineering Support DX48	SS/CPAF	Lockheed Martin Team VA	4.807	0.000		0.000		0.000		0.000	0	4.807	4.807
European Interceptor Site (EIS) Communications EIS - BCSC DX48	TBD/TBD	PM DCATS VA	3.687	0.000		0.000		0.000		0.000	0	3.687	3.687
European Interceptor Site (EIS)	TBD/TBD	DISA VA	2.001	0.000		0.000		0.000		0.000	0	2.001	2.001

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency

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DX48: European Capability Block 4

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Product Development (\$ in Millions)

				FY 2	010	FY 2 Ba	-	FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Communications EIS - Comms Power DX48													
European Interceptor Site (EIS) Communications EIS - SATCOM DX48	TBD/TBD	DISA VA	1.761	0.000		0.000		0.000		0.000	0	1.761	1.761
European Interceptor Site (EIS) Communications EIS - Terrestrial Communications Capability DX48	TBD/TBD	DISA USAFE	0.160	0.000		0.000		0.000		0.000	0	0.160	0.160
European Interceptor Site (EIS) Communications EIS - Comms Support DX48	TBD/TBD	DISA VA	0.160	0.000		0.000		0.000		0.000	0	0.160	0.160
		Subtotal	301.807	0.000		0.000		0.000		0.000	0.000	301.807	301.807

Remarks

The existing prime contract will be complete at the end of first quarter FY 2009; funding amounts shown in the R-3 for the remaining three quarters of FY 2009 are estimates.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency

APPROPRIATION/BUDGET ACTIVITY R-1 IT

0400: Research, Development, Test & Evaluation, Defense-Wide

BA 4: Advanced Component Development & Prototypes (ACD&P)

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Support (\$ in Millions)

				FY 20	010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000			

Remarks

The existing prime contract will be complete at the end of first quarter FY 2009; funding amounts shown in the R-3 for the remaining three quarters of FY 2009 are estimates.

Test and Evaluation (\$ in Millions)

				FY 2	010	FY 20 010 Bas		FY 2					
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Two-Stage Interceptor Development 2-Stage Flight Test Interceptors DX48	C/CPAF	Boeing AL/AK/AZ/CA/ CO/UT/VA	44.200	0.000		0.000		0.000		0.000	0	44.200	44.200
Two-Stage Interceptor Development 2-Stage Ground Test Interceptors DX48	C/CPAF	Boeing AL/AK/AZ/CA/ CO/UT/VA	16.000	0.000		0.000		0.000		0.000	0	16.000	16.000
		Subtotal	60.200	0.000		0.000		0.000		0.000	0.000	60.200	60.200

Remarks

NA

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Missile Defense Agency

APPROPRIATION/BUDGET ACTIVITY

0400: Research, Development, Test & Evaluation, Defense-Wide

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

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Management Services (\$ in Millions)

				FY 20	010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000			

Remarks

NA

	Total Prior Years Cost	FY 2	2010	FY 2011 Base		2011 CO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	362.007	0.000		0.000	0.000		0.000	0.000	362.007	362.007

Remarks

NA

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Missile Defense Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BVT GBI

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PE 0603908C: BMD EUROPEAN INTERCEPTOR SITE

R-1 ITEM NOMENCLATURE

PROJECT

DX48: European Capability Block 4

BA 4: Advanced Component Development & Prototypes (ACD&P)

F	Y 2	200	9	F	Y 2	201	0	F	Y 2	201	1	F	Y 2	201	2	F	Υ 2	201	3	FY 2014		FY:		2015			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Missile Defense Agency

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

0400: Research, Development, Test & Evaluation, Defense-Wide

PE 0603908C: BMD EUROPEAN

R-1 ITEM NOMENCLATURE

PROJECT

DX48: European Capability Block 4

BA 4: Advanced Component Development & Prototypes (ACD&P)

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Schedule Details

	St	art	Eı	nd
Event	Quarter	Year	Quarter	Year
BVT GBI	4	2009	4	2009